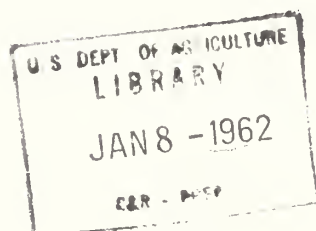


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Economic Implications of Use  
of Maleic Hydrazide on Tobacco



Tobacco Division  
Foreign Agricultural Service  
U. S. Department of Agriculture



947568

Foreword

On May 4, 1960, the Tobacco Subcommittee of the Committee on Agriculture of the House of Representatives directed the Department of Agriculture to determine what effects the use of the chemical MH-30 (maleic hydrazide) in controlling tobacco sucker growth may have upon the leaf produced for cigarette manufacture.

A scientific study was conducted by the Agricultural Research Service; its findings are published in U. S. Department of Agriculture publication ARS 34-29, issued August 1961, entitled "The Effects of Maleic Hydrazide on the Suitability of Tobacco for Cigarette Manufacture" (April 1961 report).

In the report that follows, the Foreign Agricultural Service discusses the economic implications of the use of this chemical, with particular reference to the possible effect on U. S. tobacco exports.

October 1961



## ECONOMIC IMPLICATIONS OF USE OF MALEIC HYDRAZIDE ON TOBACCO

The research study, made by the Department of Agriculture to determine the effects that utilization of maleic hydrazide on tobacco for sucker control has upon the leaf produced for cigarette manufacture, shows that this chemical changes the chemical and physical properties of the leaf.

The physical effects of maleic hydrazide on U. S. cigarette leaf suggest severe economic repercussions. The loss of filling capacity alone threatens to substantially reduce the sale of U. S. leaf for economic reasons in such very high-duty countries as Great Britain and Ireland, which together took 43 percent of U. S. flue-cured leaf exports in 1960. It would also reduce the competitiveness of U. S. leaf in other countries. A decrease in consumer smoking preferences because of the effects of maleic hydrazide, in association with other questionable changes in tobacco, would decrease export demand for U. S. leaf as soon as competitive foreign production can furnish the necessary volume.

The psychological aspects of leaf buyer opinion are a very important influence on U. S. exports. Many foreign leaf experts have expressed the opinion that maleic hydrazide adversely affects the manufacturing capacity and smoking quality of leaf tobacco. Any reduction in the suitability of U. S. leaf makes for increased possibility of the greater use of foreign leaf and/or leaf tobacco substitutes in the domestic market. The inability of the leaf buyer to recognize tobacco treated with maleic hydrazide when making his purchases is a deterrent to buying U. S. leaf.

Sales abroad are very important to the United States tobacco economy. Normally over 40 percent of the U. S. flue-cured crop goes overseas and the United States is having great difficulty competing in the foreign field.

The problem brought about by the use of maleic hydrazide on tobacco is a very serious one. However, it should be noted that there are other practices that growers use, such as over-fertilization, that tend to compound the quality problem. Such questionable practices contribute to the serious deterioration of the quality position of U. S. leaf tobacco.

Superior suitability for the making of a consumer preferred cigarette is a primary reason for continued large exports of U. S. leaf. It is a reason why cheaper leaf from foreign sources is not imported into the United States in greater quantities; it is a reason why there is not a stronger push on the part of product manufacturers to perfect artificial substitutes for tobacco. Therefore, it is imperative that the quality of U. S. leaf be maintained and, better still, improved.

The suitability of competitive foreign-grown leaf tobacco steadily improves while U. S. leaf continues to deteriorate. The quality margin held by U. S. leaf grows dangerously small. With no Government controls other than acreage allocation and minimum price, there has developed in the United States a grower concern for high yield to the extent that quality considerations have taken a minor role. A number of developments which adversely affect leaf suitability have occurred. They have been difficult to cope with because of limited authority and because the acreage control program gives an economic incentive toward the development of similar problems.

The Department of Agriculture moved as quickly as it could to handle the undesirable flue-cured variety problem of a few years ago in the only way it had authority to act - by discounting the support price on certain varieties. However, before the discount program went into effect, the undesirable varieties had already been in production for two years. About one-third of



the tobacco received by the Flue-Cured Stabilization Corporation during those two years was tobacco having undesirable characteristics associated with the discount varieties. This has necessitated price reductions and, at the present prices, a \$50 million loss will be realized on loan stock tobacco for those two crops.

Foreseeable possible financial losses from reduced demand for loan holdings of leaf because of these problems may jeopardize continuation of a tobacco support program. A successful tobacco support program rests upon human ability to readily identify and classify leaf suitability for the making of a consumer preferred product. This is becoming exceedingly difficult to do in an adequate fashion. Unknown factors caused by genetic crossbreeding and chemical additives, including the use of maleic hydrazide, are making all known classification systems of little value as leaf suitability measurements.



ECONOMIC INFORMATION ON TOBACCO

For many years the United States has been the leading producer of cigarette tobacco in the world. It has also been the largest user and exporter of cigarette tobacco. U. S. types of cigarette tobacco are flue-cured (types 11-14) burley (type 31) and Maryland tobacco (type 32).

In 1960, the cigarette tobaccos were produced on about 474,000 farms having acreage allotments determined in accordance with the marketing quota program provided by law, and administered by this Department. The total cash receipts to growers from these three kinds of tobacco in calendar year 1960 are estimated at 1,055 million dollars. In the 13 cigarette tobacco-producing States as a group, this represented about 25 percent of total receipts from crops, and 12 percent of total cash receipts from all farm products including livestock and livestock products. For major producing States cash receipts from these tobaccos accounted for 20 to 70 percent of the cash receipts from crops and 7 to 48 percent of total cash receipts from all farm products.

In recent years (1958-60), U. S. growers harvested an average of 1,011,090 acres of the cigarette types of tobacco annually, and production averaged 1,657 million pounds annually. These tobaccos were marketed in about 845 warehouses in 161 market towns and cities located in the producing areas. Following its purchase from growers the tobacco is redried, packed, and moved into storage for aging that normally takes around 2 years or longer.

In 1960, the domestic use and exports of the cigarette tobaccos totaled about 1,793 million pounds (farm sales weight). Domestic use (that utilized in U. S. factories) is estimated at 1,275 million pounds. Of this about 1,175 million pounds (farm sales weight equivalent) was for the manufacture

of cigarettes and the balance went into other tobacco products, mainly smoking tobacco.

In this country, the 1960 expenditures by consumers for smoking products containing U. S. cigarette tobaccos totaled an estimated 6,720 million dollars - about 98 percent of which was for cigarettes. Included in these expenditures by consumers, of course, are the excise taxes levied on tobacco products by the Federal, State, and local Governments. The revenue collections by Federal, State, and local Governments from cigarettes and smoking tobacco in 1960 are estimated at 2,910 million dollars.

The United States output of cigarettes in 1960 was 507 billion, a record high. Approximately 60 million U. S. smokers (including those in overseas forces) consumed 484 billion, or about 96 percent of the output. Over 20 billion cigarettes with a declared value of 87-1/2 million dollars were exported and the remainder were shipped to Puerto Rico and island possessions of the United States. The United States is the leading exporter of cigarettes as well as the leading exporter of leaf tobacco. The 1960 consumption of smoking tobacco made in this country for pipes and "roll-your-own" cigarettes was about 72-1/2 million pounds. In addition, 8-2/3 million pounds of partially processed and packaged smoking tobaccos valued at nearly 8-3/4 million dollars were exported in 1960.

U. S. cigarette tobacco as a commodity is of tremendous scope, involving as it does a large number of growers: the warehousemen, manufacturers, dealers, exporters, the Government, and many million consumers in this country and abroad.

The World Export Market: For nearly 350 years, tobacco has been an important commodity in international trade. Exports from free world countries now amount to close to 1.5 billion pounds a year. Another 200 to 250 million

pounds move from Soviet Bloc countries and Mainland China, but most of this leaf remains within the "bloc" area.

International trade in tobacco reflects consumer preferences for the various kinds of tobacco products. Artificial measures of control, however, usually governmental, always have played an important role in shaping consumer preferences for tobacco products and for the types of leaf used in their manufacture. Politico-economic considerations have been effective in directing import trade in leaf tobacco into desired channels. These control measures also have had the effect of limiting the quantities of leaf which otherwise would have moved in world trade.

More tobacco is being grown in countries where it is consumed. The world export market for tobacco is not limitless. On the contrary, there is intense competition for the markets that are available.

Government restrictions on international tobacco trade have continued to increase over the years, and now constitute the most important factor influencing such trade. The operation of Government monopolies, high tariff levels, preferential duties, quotas, licensing and foreign exchange controls, bilateral trading arrangements, guaranteed markets, and mixing regulations, all tend to limit the amount of leaf imports.

The United States, from the earliest colonial period, has been the world's largest leaf tobacco exporting country. For the past several years, about one-third of all tobacco entering free world export trade has been of U. S. origin. In 1960, of total free world exports amounting to about 1,450 million pounds, the U. S. supplied 495 million pounds, or 34 percent. The value of total U. S. tobacco leaf exports last year was \$378 million, a calendar year record. But the U. S. share in world trade has been dropping rather steadily since the end of World War II. Although the actual average volume of U. S.



tobacco exports in the past few years compares favorably with a decade ago, the United States is slowly declining in importance as an exporting country. During the period 1947-51, the U. S. share of free world tobacco exports was 43 percent; for 1950-54 it was 38 percent; for 1955-59 it was 35 percent. Historical volume of production and superior quality have been the most important factors in maintaining U. S. leaf exports.

Most tobaccos shipped from the United States consist of cigarette types - flue-cured, burley, and Maryland. Together these types account for more than 90 percent of total U. S. exports, with flue-cured alone representing more than 80 percent. This reflects the importance of cigarette tobaccos in world trade.

The big gains in competitive exports in recent years have been largely in flue-cured and other cigarette leaf - mostly oriental. Flue-cured tobacco now accounts for nearly one-half of total free world export trade. But the U. S. share of free world flue-cured exports now approximates 58 percent, compared with 73 percent in 1947-51. The Rhodesian Federation, India and Canada - major competitors of the United States in flue-cured export trade - have increased their shipments sharply. In 1947-51, these 3 countries shipped an average of 132 million pounds of flue-cured to foreign markets; in 1960, the total for the three was 266 million pounds. This represents a gain of more than 100 percent. In contrast, the United States exported an average of 388 million pounds of flue-cured in 1947-51, and 408 million pounds in 1960 - a gain of only 5 percent. (Mainland China is reported to export about 100 million pounds of flue-cured annually, but most of this goes to Soviet Bloc countries.)

Exports of oriental leaf (mainly from Turkey, Greece, and Yugoslavia) also have increased sharply since the end of World War II. The U. S. produces only insignificant amounts of oriental leaf and exports none. But the

level of purchases of oriental leaf by foreign countries indirectly, at least, affects world demand for other types of cigarette tobaccos - particularly flue-cured. In 1947-51, average exports of oriental leaf from the 3 major free world suppliers were 200 million pounds; the totals for 1958 and 1959 were 312 million pounds and 304 million pounds, respectively.

The United States remains the world's most important world supplier of burley leaf, although in recent years Japan and Italy both have stepped up their exports in competition with U. S. burley in the traditional Western European market.

Major World Markets for Cigarette Tobacco: Western European countries (including the United Kingdom and Ireland) provide the principal outlets for cigarette tobaccos moving in world trade, including those from the United States. In 1960, Western Europe purchased 361 million pounds of U. S. cigarette leaf (flue-cured, burley, and Maryland), representing 80 percent of the total U. S. exports of these types. Developments in Western Europe, therefore, strongly affect the levels of U. S. tobacco export trade.

The formation of the European Economic Community (Common Market), composed of West Germany, the Netherlands, Belgium, Luxembourg, France, and Italy, poses many problems for U. S. exports of cigarette leaf. The U. S. position in the Common Market has begun to deteriorate as manufacturers there have taken into account the implications of the tariff structure upon their costs of leaf. (In 1959, the U. S. share of the Common Market tobacco import trade was down to 28 percent, compared with an average of 33 percent for 1953-57.) Flue-cured tobacco exports from the U. S. have already suffered a percentage drop in the total flue-cured imports of these countries, with purchases from the Rhodesian Federation showing particularly sharp gains.

By far the most important development in the Common Market area is the proposed duty rate that will eventually be applied to imports from the United States and other outside countries. The Rome Treaty, establishing the Common Market, provided for the establishment of a 30 percent ad valorem tariff (by gradual steps) on all external tobaccos.

The Council of Ministers of the Common Market countries has recently proposed that instead of a flat tariff of 30 percent ad valorem, there would be a 30 percent ad valorem rate, with a minimum tariff of 13.2 cents per pound and a maximum of 19.1 cents. By far the largest proportion of U. S. exports of flue-cured tobaccos to the Common Market area are priced sufficiently high so that the maximum rate would apply. On the other hand, most competitive flue-cured tobacco averages less in price than U. S. flue-cured, and on such tobacco the tariff would be less than 19.1 cents, and in many cases at the minimum of 13.2 cents, thus further adding to the price advantage enjoyed by U. S. competitors. The present tariff rates are specific ones, applying equally to all external tobaccos. France and Italy have tobacco monopolies, and no duties are presently applied on imports.

It has also been agreed by the member countries that the internal tariff, including that on Associated Overseas Territories, eventually will be reduced to zero. Two cuts of 19 percent each have already been made, encouraging manufacturers, especially in West Germany, to increase the use of Italian cigarette tobaccos.

The possible association of Greece and Turkey with the Common Market eventually may place tobacco imports from those countries in the duty-free category, further weakening the U. S. competitive position.

U. K. Major World Market: The United Kingdom, the largest tobacco importer in the world, purchased a total of 362 million pounds of tobacco in 1960. Flue-cured tobacco accounted for 94 percent of the total, with the United States



supplying 175 million pounds of flue-cured, or 51 percent of the U.K.'s total imports of this type of leaf. In 1960, the United Kingdom took 42 percent of all U.S. flue-cured exports.

Since World War II, British purchases of Commonwealth flue-cured tobaccos have been stimulated by: (1) a guaranteed purchase arrangement between U.K. manufacturers and Rhodesian flue-cured growers, and (2) the preferential tariff on Commonwealth tobacco (mainly flue-cured) amounting to about 21.5 cents per pound. Presently, the agreement provides for the purchase of 95 to 100 million pounds of Rhodesian flue-cured annually. The guaranteed purchase agreement, plus the tariff preference, have permitted sharply increased sales of quality Rhodesian flue-cured leaf to the United Kingdom, and have also permitted sale of less desirable grades of tobacco to West European countries at prices lower than they should bring at auction and sometimes even below the actual production costs.

Tariffs have a very important influence on the pattern of leaf tobacco exports. The present United Kingdom tariff on the principal category of leaf imports from the United States is equivalent to \$9.03 per pound, and in Ireland it is \$6.70. In both of these countries tariffs on cigarette leaf are so high that manufacturers feel it imperative to purchase high-quality tobaccos with maximum cigarette-filling capacity. The loss of leaf filling capacity of 7 percent, for example, when translated to duty-paid costs in the United Kingdom, for practicable purposes, in effect doubles the auction warehouse cost of the leaf.

In Australia, the largest market for U. S. cigarette leaf outside the United Kingdom and the Common Market area, regulations favor ever-increasing use of domestic tobacco. The Australian Government authorizes a duty concession of 17 pence (15.8 U.S. cents) per pound in the tariff on imported

leaf when such leaf is blended with the minimum prescribed percentages of domestic tobacco. The loss of filling capacity of leaf moving to this important market also would tend to step up the already sharply increased use of Australian grown leaf.

World Flue-Cured Production Up Sharply: The capacity of competing cigarette leaf producers to sharply step up their crops of flue-cured and other cigarette tobaccos is well illustrated by developments in recent years.

Flue-cured production in the Rhodesian Federation rose from an average of 28 million pounds in 1935-39 to a record 222 million pounds in 1960. A further increase to about 235 million pounds is forecast for 1961. Canada also had a record crop in 1960 - 203 million pounds, up nearly a third from 1959. India's 1960 crop also was at record levels.

Oriental tobacco producing countries, likewise, have increased their crops since the end of World War II. Turkey had a record crop of around 300 million pounds in 1960. In Greece, production during the past several years dropped because of excessive supplies from the very large previous crops. Total world production of oriental tobacco was 1,148 million pounds in 1960, compared with an average of only 818 million in 1950-54.

The United States still produces most of the world's burley, but several countries have sharply raised production in recent years. These include Italy and Japan, both of which are exporting burley leaf at prices considerably below prices for U. S. burley.

U. S. Large Importer of Cigarette Leaf: U. S. imports for consumption of unmanufactured tobacco set a record in 1960, totaling 160 million pounds, compared with 152 million in 1959. The 1960 imports were 57 percent larger than the average for 1950-54.

Most U. S. tobacco imports consist of oriental leaf for blending with domestic tobaccos in cigarette manufacture, and cigar-filler and scrap. U.S. imports and use of foreign-grown leaf have risen steadily in the past decade.

Cigarette leaf (mainly oriental) makes up about 75 percent of total U.S. imports of unmanufactured tobacco. Imports of cigarette leaf in 1960 totaled 119 million pounds, valued at \$84.7 million, compared with 112 million pounds in 1959, and with a 1950-54 average of 76 million pounds.

Turkey and Greece are the largest shippers of cigarette leaf to the United States. In 1960, they supplied a total of 107 million pounds. Other important sources of supply last year were Yugoslavia and Italy. Some oriental leaf originates in the Federation of Rhodesia and Nyasaland. Only minor quantities of flue-cured and burley are imported.

Annual imports for consumption are a fairly reliable indicator of manufacturers' usings of foreign-grown cigarette tobaccos. At present, about 11 percent of the average U.S. cigarette consists of imported tobacco. The total volume of foreign cigarette leaf in U.S. cigarettes is nearly 3 times as large as the average for 1934-38. This is mostly due to larger cigarette output.

Under the Tariff Act of 1930, the U.S. tariff on imports of cigarette leaf was originally 35 cents per pound. There has been a gradual reduction in the tariff over the years since World War II, and the present rate, which became effective June 30, 1958, is 12-3/4 cents per pound. This rate applies to imports of cigarette leaf from all countries, except those in the Soviet Bloc (excluding Poland), for which the 1930 rate applies. Present landed costs of imported cigarette leaf to U.S. tobacco manufacturers average about 74 cents per pound, exclusive of the tariff of 12-3/4 cents. Since the tobacco as imported, is ready to use without further processing, these costs compare very favorably with costs of U.S.-grown cigarette leaf. Some increase in the percentage of oriental leaf used in U.S. cigarettes appears likely. There is no economic barrier to the use of large amounts of foreign-grown flue-cured and burley leaf tobaccos in U.S. made cigarettes. With the decreasing quality margin of U.S. leaf, there is less reason on this score to exclude importation and use of foreign leaf.



Table 1.--Harvested Acreage and Production of U. S. Cigarette Types  
of Tobacco by States, 1958-60

| Tobacco Types<br>and States     | Acreage        |                |                    | Production        |                   |                    |
|---------------------------------|----------------|----------------|--------------------|-------------------|-------------------|--------------------|
|                                 | 1958           | 1959           | 1960 <sup>1/</sup> | 1958              | 1959              | 1960 <sup>1/</sup> |
|                                 | 1,000<br>acres | 1,000<br>acres | 1,000<br>acres     | million<br>pounds | million<br>pounds | million<br>pounds  |
| <u>Flue-cured (types 11-14)</u> |                |                |                    |                   |                   |                    |
| *North Carolina                 | 429.0          | 458.5          | 458.5              | 736.9             | 702.9             | 834.6              |
| South Carolina                  | 76.0           | 81.0           | 81.0               | 131.1             | 143.0             | 147.0              |
| *Virginia                       | 65.0           | 70.5           | 70.5               | 106.6             | 110.0             | 116.3              |
| Georgia                         | 58.0           | 69.0           | 70.0               | 89.6              | 104.9             | 129.2              |
| Florida                         | 11.1           | 13.9           | 13.8               | 16.5              | 19.4              | 22.0               |
| Alabama                         | .3             | .4             | .5                 | .4                | .6                | .7                 |
| Total                           | 639.4          | 693.3          | 694.3              | 1,081.1           | 1,080.8           | 1,249.8            |
| <u>Burley (type 31)</u>         |                |                |                    |                   |                   |                    |
| Kentucky                        | 199.0          | 199.0          | 197.0              | 300.5             | 322.4             | 325.0              |
| Tennessee                       | 58.0           | 60.0           | 57.5               | 97.4              | 102.0             | 94.9               |
| *Virginia                       | 10.2           | 10.6           | 10.3               | 19.8              | 22.0              | 21.1               |
| *North Carolina                 | 9.3            | 9.8            | 9.6                | 18.6              | 20.2              | 19.7               |
| Ohio                            | 8.8            | 9.2            | 9.1                | 12.4              | 15.0              | 15.0               |
| Indiana                         | 7.0            | 6.9            | 7.0                | 10.6              | 12.1              | 11.2               |
| Missouri                        | 2.6            | 3.0            | 3.0                | 3.2               | 4.7               | 4.6                |
| West Virginia                   | 2.2            | 2.5            | 2.5                | 3.0               | 4.0               | 4.1                |
| Total                           | 297.1          | 301.0          | 296.0              | 465.5             | 502.4             | 495.6              |
| <u>Maryland (type 32)</u>       |                |                |                    |                   |                   |                    |
| Maryland                        | 34.0           | 40.0           | 37.5               | 31.1              | 31.2              | 32.8               |
| Total U. S.<br>Cigarette Types  | 970.5          | 1,034.3        | 1,027.8            | 1,577.7           | 1,614.4           | 1,778.2            |

<sup>1/</sup> December estimates and subject to revision; final data on burley marketings indicate a downward version will be made in burley production estimates.

\* States that produce both flue-cured and burley.



Table 2 -- Cash receipts from all types of tobacco compared  
with total cash receipts from all farm commodities,  
selected States and United States, average  
1954-58, annual 1959-60

| State 1/      | Average 1954-58 |             |      | 1959           |             |      | 1960 2/        |             |      |
|---------------|-----------------|-------------|------|----------------|-------------|------|----------------|-------------|------|
|               | Cash receipts   | Tobacco     |      | Cash receipts  | Tobacco     |      | Cash receipts  | Tobacco     |      |
|               | as per-         | as per-     |      | as per-        | as per-     |      | as per-        | as per-     |      |
|               | centage         | centage     |      | centage        | centage     |      | centage        | centage     |      |
|               | Total: Tobacco  | of          |      | Total: Tobacco | of          |      | Total: Tobacco | of          |      |
|               |                 | total       |      |                | total       |      |                | total       |      |
|               |                 | : receipts: |      |                | : receipts: |      |                | : receipts: |      |
|               | Mil.            | Mil.        |      | Mil.           | Mil.        |      | Mil.           | Mil.        |      |
|               | dol.            | dol.        | Pct. | dol.           | dol.        | Pct. | dol.           | dol.        | Pct. |
| N. C.         | 959             | 469         | 48.9 | 968            | 420         | 43.4 | 1,076          | 519         | 48.2 |
| Ky.           | 554             | 229         | 41.3 | 571            | 220         | 38.5 | 556            | 200         | 36.0 |
| S. C.         | 343             | 85          | 24.8 | 355            | 90          | 25.4 | 353            | 88          | 24.9 |
| Va.           | 455             | 81          | 17.8 | 444            | 79          | 17.8 | 458            | 85          | 18.6 |
| Tenn.         | 475             | 74          | 15.6 | 520            | 72          | 13.8 | 501            | 62          | 12.4 |
| Ga.           | 659             | 60          | 9.1  | 718            | 64          | 8.9  | 782            | 77          | 9.8  |
| Conn.         | 165             | 22          | 13.3 | 155            | 19          | 12.3 | 158            | 17          | 10.8 |
| Md.           | 246             | 18          | 7.3  | 262            | 18          | 6.9  | 280            | 20          | 7.1  |
| Fla.          | 644             | 21          | 3.3  | 806            | 23          | 2.9  | 764            | 26          | 3.4  |
| Pa.           | 751             | 11          | 1.5  | 774            | 14          | 1.8  | 788            | 17          | 2.2  |
| Mass.         | 169             | 8           | 4.7  | 157            | 6           | 3.8  | 168            | 6           | 3.6  |
| Wis.          | 1,041           | 6           | .6   | 1,072          | 8           | .7   | 1,115          | 7           | .6   |
| Ohio          | 1,000           | 11          | 1.1  | 940            | 10          | 1.1  | 1,004          | 11          | 1.1  |
| Ind.          | 1,070           | 7           | .7   | 1,039          | 8           | .8   | 1,099          | 7           | .6   |
| Ala.          | 447             | 0.3         | .1   | 512            | 0.3         | .1   | 529            | 0.4         | .1   |
| Mo.           | 1,015           | 2           | .2   | 1,140          | 2           | .2   | 1,136          | 4           | .4   |
| W. Va.        | 112             | 2           | 1.8  | 109            | 2           | 1.8  | 106            | 2           | 1.9  |
| Subtotal of   |                 |             |      |                |             |      |                |             |      |
| above States: | 10,105          | 1,106       | 10.9 | 10,542         | 1,055       | 10.0 | 10,873         | 1,148       | 10.6 |
| U. S.         | 30,677          | 1,108       | 3.6  | 33,146         | 1,056       | 3.2  | 33,746         | 1,148       | 3.4  |

1/ Connecticut, Pennsylvania, Massachusetts and Wisconsin produce cigar types of tobacco only, while other States listed produce cigarette types and, in some instances, other types also.

2/ Preliminary

Table 3.--Cigarettes: Output, Domestic Consumption, Shipments, Exports; and Smoking Tobacco Outputs for Specified Periods

| Period         | Cigarettes |             |                            |                            |          | Smoking |
|----------------|------------|-------------|----------------------------|----------------------------|----------|---------|
|                |            |             |                            |                            |          | Tobacco |
|                | Total      | Domestic    | Overseas                   | Puerto Rico                | Exports  | Total   |
|                | Output     | Consumption | Forces and Other <u>1/</u> | and U.S. Islands <u>2/</u> |          | Output  |
|                | Billions   | Billions    | Billions                   | Billions                   | Billions | Mil.Lb. |
| Average:       |            |             |                            |                            |          |         |
| 1935-39        | 164.2      | 157.0       | 0.9                        | 0.8                        | 5.5      | 195.3   |
| 1940-44        | 256.9      | 223.5       | 26.5                       | 1.0                        | 5.8      | 176.2   |
| 1945           | 332.2      | 267.2       | 56.9                       | 1.2                        | 6.9      | 168.5   |
| 1946           | 350.0      | 321.7       | 5.0                        | 1.6                        | 24.1     | 106.4   |
| 1947           | 369.7      | 335.4       | 10.4                       | 1.1                        | 22.8     | 104.7   |
| 1948           | 386.8      | 348.5       | 12.8                       | 1.7                        | 25.2     | 107.6   |
| 1949           | 385.0      | 351.8       | 12.0                       | 1.7                        | 19.5     | 108.1   |
| 1950           | 392.0      | 360.2       | 15.6                       | 1.9                        | 14.3     | 107.7   |
| 1951           | 418.8      | 379.7       | 20.1                       | 2.0                        | 16.8     | 101.3   |
| 1952           | 435.5      | 394.1       | 21.7                       | 1.9                        | 16.4     | 96.8    |
| 1953           | 423.1      | 386.8       | 18.8                       | 2.0                        | 16.2     | 86.6    |
| 1954           | 401.8      | 368.7       | 15.9                       | 1.8                        | 15.4     | 83.7    |
| 1955           | 412.3      | 382.1       | 13.2                       | 2.0                        | 15.1     | 80.0    |
| 1956           | 424.2      | 393.2       | 13.3                       | 2.0                        | 15.7     | 71.5    |
| 1957           | 442.3      | 409.4       | 13.7                       | 2.1                        | 17.0     | 70.5    |
| 1958           | 470.1      | 436.4       | 13.4                       | 2.2                        | 18.1     | 76.0    |
| 1959           | 489.9      | 453.7       | 13.7                       | 2.5                        | 19.6     | 73.2    |
| 1960 <u>3/</u> | 506.9      | 470.1       | 14.3                       | 2.5                        | 20.2     | 73.8    |

1/ Includes ship stores and small tax-exempt categories.

2/ Includes Virgin Islands, Guam, American Samoa; Wake, Canton and Enderbury Islands

3/ Preliminary.

Data from Internal Revenue Service and Census Bureau.

Economic Research Service

Table 4.--Federal and State Tax Revenue from Tobacco Products  
for Specified Periods

| Period   | F e d e r a l |          |                                |             | States 2/                  | Total                   |
|----------|---------------|----------|--------------------------------|-------------|----------------------------|-------------------------|
|          | Cigarettes    | Cigars   | Chewing,<br>Smoking<br>& Snuff | Total<br>1/ | All Tobacco<br>Products 3/ | Federal<br>and<br>State |
|          |               |          |                                |             |                            |                         |
|          | Mil.Dol.      | Mil.Dol. | Mil. Dol.                      | Mil.Dol.    | Mil.Dol.                   | Mil.Dol.                |
| Average: |               |          |                                |             |                            |                         |
| 1930-34  | 345           | 14       | 64                             | 424         | 17                         | 441                     |
| 1935-39  | 472           | 13       | 62                             | 548         | 55                         | 603                     |
| 1940-44  | 750           | 21       | 57                             | 833         | 133                        | 966                     |
| 1945     | 937           | 38       | 57                             | 1,034       | 168                        | 1,202                   |
| 1946     | 1,125         | 48       | 45                             | 1,218       | 218                        | 1,436                   |
| 1947     | 1,176         | 47       | 43                             | 1,267       | 289                        | 1,556                   |
| 1948     | 1,221         | 47       | 44                             | 1,312       | 375                        | 1,687                   |
| 1949     | 1,233         | 44       | 42                             | 1,320       | 406                        | 1,726                   |
| 1950     | 1,263         | 43       | 41                             | 1,348       | 445                        | 1,793                   |
| 1951     | 1,360         | 44       | 37                             | 1,446       | 461                        | 1,907                   |
| 1952     | 1,580         | 46       | 22                             | 1,662       | 485                        | 2,147                   |
| 1953     | 1,546         | 46       | 21                             | 1,614       | 486                        | 2,100                   |
| 1954     | 1,477         | 45       | 20                             | 1,543       | 476                        | 2,019                   |
| 1955     | 1,530         | 46       | 20                             | 1,596       | 500                        | 2,096                   |
| 1956     | 1,576         | 45       | 18                             | 1,639       | 573                        | 2,212                   |
| 1957     | 1,639         | 46       | 18                             | 1,704       | 614                        | 2,318                   |
| 1958     | 1,750         | 49       | 18                             | 1,817       | 673                        | 2,490                   |
| 1959     | 1,792         | 51       | 16                             | 1,860       | 841                        | 2,701                   |
| 1960 4/  | 1,887         | 50       | 17                             | 1,955       | 990 5/                     | 2,945                   |

1/ Includes leaf dealer penalties, floor taxes, cigarette papers and tubes, etc.

2/ Includes District of Columbia and from 1957 on, Alaska and Hawaii.

3/ In postwar years cigarette taxes have accounted for about 97 percent of State tobacco tax revenues.

4/ Preliminary.

5/ Estimated.

General Note: Local government tax collections from tobacco products in recent years have averaged about \$50 million.

Data from Internal Revenue Service, National Tobacco Tax Assn., and other sources.



Table 5.--Consumer Expenditures for Tobacco  
Products, 1939-60

| Year               | Consumer Expenditures for Tobacco Products |            |          |                     |
|--------------------|--|------------|----------|---------------------|
|                    | Total                                      | Cigarettes | Cigars   | Other <sup>1/</sup> |
|                    | Mil.Dol.                                   | Mil.Dol.   | Mil.Dol. | Mil.Dol.            |
| 1939               | 1,767                                      | 1,207      | 261      | 299                 |
| 1940               | 1,883                                      | 1,316      | 265      | 302                 |
| 1941               | 2,108                                      | 1,518      | 284      | 306                 |
| 1942               | 2,381                                      | 1,773      | 305      | 303                 |
| 1943               | 2,677                                      | 2,024      | 358      | 295                 |
| 1944               | 2,717                                      | 2,025      | 402      | 290                 |
| 1945               | 2,972                                      | 2,208      | 443      | 321                 |
| 1946               | 3,478                                      | 2,656      | 542      | 280                 |
| 1947               | 3,869                                      | 3,044      | 547      | 278                 |
| 1948               | 4,155                                      | 3,319      | 548      | 288                 |
| 1949               | 4,272                                      | 3,463      | 520      | 289                 |
| 1950               | 4,432                                      | 3,626      | 514      | 292                 |
| 1951               | 4,743                                      | 3,934      | 526      | 283                 |
| 1952               | 5,153                                      | 4,326      | 545      | 282                 |
| 1953               | 5,365                                      | 4,537      | 560      | 268                 |
| 1954               | 5,218                                      | 4,406      | 552      | 260                 |
| 1955               | 5,350                                      | 4,544      | 549      | 257                 |
| 1956               | 5,638                                      | 4,843      | 553      | 242                 |
| 1957               | 6,064                                      | 5,267      | 557      | 240                 |
| 1958               | 6,399                                      | 5,564      | 581      | 254                 |
| 1959               | 7,034                                      | 6,132      | 625      | 277                 |
| 1960 <sup>2/</sup> | 7,525                                      | 6,600      | 650      | 275                 |

<sup>1/</sup> Smoking, chewing, and snuff.

<sup>2/</sup> Preliminary estimate.

Data, except the 1960 tobacco expenditure estimates, from United States Department of Commerce.

Table 6 .—Flue-cured tobacco, types 11-14: Domestic supplies, disappearance, season average price, and price support operations for specified periods

| (Farm-sales weight) |                    |                           |          |  |                       |  |                               |
|---------------------|--------------------|---------------------------|----------|--|-----------------------|--|-------------------------------|
| Year                | Production         | Stocks,<br>July 1         | Supply   | Disappearance 1/                         |                       |  | Average<br>price<br>per pound |
|                     |                    |                           |          | Total                                    | Domestic              | Exports  |                               |
|                     | Mil. lb.           | Mil. lb.                  | Mil. lb. | Mil. lb.                                 | Mil. lb.              | Mil. lb.   | Ct.                           |
| Average:            |                    |                           |          |  |                       |  |                               |
| 1934-38             | 741                | 845                       | 1,586    | 704                                      | 338                   | 366  | 22.9                          |
| 1941-45             | 902                | 1,349                     | 2,251    | 992                                      | 617                   | 375  | 38.5                          |
| 1947-49             | 1,174              | 1,458                     | 2,632    | 1,108                                    | 715                   | 393  | 46.0                          |
| 1950                | 1,257              | 1,485                     | 2,742    | 1,185                                    | 757                   | 428  | 54.7                          |
| 1951                | 1,453              | 1,557                     | 3,010    | 1,279                                    | 777                   | 502  | 52.4                          |
| 1952                | 1,365              | 1,731                     | 3,096    | 1,244                                    | 828                   | 416  | 50.3                          |
| 1953                | 1,272              | 1,852                     | 3,124    | 1,209                                    | 778                   | 431  | 52.8                          |
| 1954                | 1,314              | 1,915                     | 3,229    | 1,173                                    | 744                   | 429  | 52.7                          |
| 1955                | 1,483              | 2,056                     | 3,539    | 1,281                                    | 728                   | 553  | 52.7                          |
| 1956                | 1,423              | 2,258                     | 3,681    | 1,170                                    | 705                   | 465  | 51.5                          |
| 1957                | 975                | 2,511                     | 3,486    | 1,178                                    | 737                   | 441  | 55.4                          |
| 1958                | 1,081              | 2,308                     | 3,389    | 1,179                                    | 736                   | 443  | 58.2                          |
| 1959                | 1,081              | 2,210                     | 3,291    | 1,185                                    | 766                   | 419  | 58.3                          |
| 1960 2/             | 1,250              | 2,106                     | 3,356    |  |                       |  | 60.4                          |
|                     |                    |                           |          |  |                       |  |                               |
|                     | Parity<br>price 3/ | Price<br>support<br>level |          | Placed under Government loan<br>Quantity | Percentage<br>of crop | Remaining in<br>Government loan<br>stocks on<br>March 1, 1961 4/ |                               |
|                     | Ct.                | Ct.                       |          | Mil. lb.                                 | Pct.                  | Mil. lb.   |                               |
| 1950                | 50.0               | 45.0                      |          | 77.6                                     | 6.2                   | 0  |                               |
| 1951                | 56.3               | 50.7                      |          | 142.2                                    | 9.8                   | 0  |                               |
| 1952                | 56.2               | 50.6                      |          | 5/165.0                                  | 12.1                  | 0  |                               |
| 1953                | 53.2               | 47.9                      |          | 151.4                                    | 11.9                  | 0  |                               |
| 1954                | 53.2               | 47.9                      |          | 130.2                                    | 9.9                   | 0  |                               |
| 1955                | 53.7               | 48.3                      |          | 298.9                                    | 20.2                  | 127.3  |                               |
| 1956                | 54.3               | 48.9                      |          | 319.9                                    | 22.5                  | 124.9  |                               |
| 1957                | 56.5               | 50.8                      |          | 107.8                                    | 11.1                  | 61.7   |                               |
| 1958                | 60.7               | 54.6                      |          | 144.8                                    | 13.4                  | 96.2   |                               |
| 1959                | 61.7               | 55.5                      |          | 55.3                                     | 5.1                   | 45.4   |                               |
| 1960                | 63.4               | 55.5                      |          | 51.8                                     | 4.1                   | 49.5   |                               |
| 1961                | 64.9               | 55.5                      |          |  |                       |  |                               |
| Total               |                    |                           |          | 1,644.9                                  |                       | 505.0  |                               |

1/ Year beginning July 1. 2/ Subject to revision. 3/ Through 1959, as of date determining support level; but from 1960 on, supports are not set at 90 percent of parity. The parity shown for 1960 is as of June and for 1961, as of February. 4/ As reported by Flue-cured Tobacco Cooperative Stabilization Corporation; actual loan stocks on a packed-weight basis average about 11 percent less than these farm-sales weight figures. 5/ An additional 78.4 million pounds under option to British manufacturers were pledged for CCC loans, but were purchased and shipped by mid-1953.

Table 7.—Burley tobacco, type 31: Domestic supplies, disappearance, season average price, and price support operations for specified periods

| (Farm-sales weight) |                 |                     |          |                              |                    |   |                               |
|---------------------|-----------------|---------------------|----------|------------------------------|--------------------|---|-------------------------------|
| Year                | Production:     | Stocks,<br>Oct. 1   | Supply   | Disappearance 1/             |                    |   | Average<br>price<br>per pound |
|                     |                 |                     |          | Total                        | Domestic           | Exports   |                               |
| Average:            | Mil. lb.        | Mil. lb.            | Mil. lb. | Mil. lb.                     | Mil. lb.           | Mil. lb.  | Ct.                           |
| 1934-38             | 287             | 701                 | 988      | 314                          | 302                | 12  | 22.2                          |
| 1941-45             | 448             | 730                 | 1,178    | 437                          | 424                | 13  | 40.0                          |
| 1947-49             | 550             | 939                 | 1,489    | 530                          | 493                | 37  | 46.6                          |
| 1950                | 499             | 1,000               | 1,499    | 518                          | 488                | 30  | 49.0                          |
| 1951                | 618             | 981                 | 1,599    | 538                          | 506                | 32  | 51.2                          |
| 1952                | 650             | 1,061               | 1,711    | 548                          | 519                | 29  | 50.3                          |
| 1953                | 564             | 1,163               | 1,727    | 529                          | 494                | 35  | 52.5                          |
| 1954                | 668             | 1,198               | 1,866    | 519                          | 486                | 33  | 49.8                          |
| 1955                | 470             | 1,347               | 1,817    | 518                          | 484                | 34  | 58.6                          |
| 1956                | 506             | 1,299               | 1,805    | 510                          | 482                | 28  | 63.6                          |
| 1957                | 488             | 1,295               | 1,783    | 506                          | 478                | 28  | 60.3                          |
| 1958                | 465             | 1,277               | 1,742    | 518                          | 483                | 35  | 66.1                          |
| 1959                | 502             | 1,224               | 1,726    | 535                          | 499                | 36  | 60.4                          |
| 1960 2/             | *480            | 1,191               | 1,671    |                              |                    |   | 64.3                          |
|                     |                 |                     |          |                              |                    |   |                               |
|                     |                 |                     |          |                              |                    |   |                               |
|                     |                 |                     |          |                              |                    |   |                               |
|                     | Parity price 3/ | Price support level |          | Placed under Government loan |                    | Remaining in Government loan stocks on Feb. 28, 1961 4/ |                               |
|                     |                 |                     |          | Quantity                     | Percentage of crop |   |                               |
|                     | Ct.             | Ct.                 |          | Mil. lb.                     | Pct.               |   | Mil. lb.                      |
| 1950                | 50.8            | 45.7                |          | 44.2                         | 8.9                |   | 0                             |
| 1951                | 55.3            | 49.8                |          | 97.3                         | 15.7               |   | 0                             |
| 1952                | 55.0            | 49.5                |          | 103.9                        | 16.0               |   | 0                             |
| 1953                | 51.8            | 46.6                |          | 102.1                        | 18.1               |   | 0                             |
| 1954                | 51.5            | 46.4                |          | 221.4                        | 33.2               |   | 54.0                          |
| 1955                | 51.3            | 46.2                |          | 73.1                         | 15.6               |   | 2.2                           |
| 1956                | 53.4            | 48.1                |          | 6.0                          | 1.2                |   | .4                            |
| 1957                | 57.4            | 51.7                |          | 16.6                         | 3.4                |   | 8.9                           |
| 1958                | 61.6            | 55.4                |          | 11.2                         | 2.4                |   | 10.6                          |
| 1959                | 63.6            | 57.2                |          | 13.2                         | 2.6                |   | 8.5                           |
| 1960                | 65.6            | 57.2                |          | 8.4                          | 1.7                |   | 8.4                           |
| 1961                | 68.9            | 57.2                |          |                              |                    |   |                               |
| Total               | —               | —                   |          | 697.4                        | —                  |   | 93.0                          |

1/ Year beginning October 1. 2/ Subject to revision. 3/ Through 1959, as of date determining support level; but from 1960 on, supports are not set at 90 percent of parity. The parity shown for 1960 is as of Sept. and for 1961, as of February. 4/ Actual loan stocks on a packed-weight basis average about 11 percent less than these farm-sales weight figures. \*Indicated by sales date.

Table 8.—Maryland tobacco, type 32: Domestic supplies, disappearance, season average price, and price support operations for specified periods

[illegible]

1/ For marketing quota purposes, the carryover and total supply of Maryland tobacco are calculated as of January 1 falling within the marketing year--October 1 through September 30.

2/ Year beginning October 1. 3/ Subject to revision. 4/ Through 1959, as of date determining support level or when no support, October 1; but from 1960 on, supports are not set at 90 per cent of parity. The parity shown for 1960 is as of September and for 1961, as of February.

5/ Actual loan stocks on a packed-weight basis average about 2 percent less than these farm-sales weight figures. 6/ Marketing quota not in effect since less than two-thirds of growers voting approved.

TABLE 9 - Flue-Cured Tobacco: Exports by Major Free-World Exporting Countries 1/

| Country         | Average<br>1934-38 | Average<br>1947-51 | Average<br>1952-56 | 1957              | 1958              | 1959              | 1960 2/           |
|-----------------|--------------------|--------------------|--------------------|-------------------|-------------------|-------------------|-------------------|
|                 | Million<br>Pounds  | Million<br>Pounds  | Million<br>Pounds  | Million<br>Pounds | Million<br>Pounds | Million<br>Pounds | Million<br>Pounds |
| United States   | 325                | 388                | 403                | 418               | 399               | 374               | 408               |
| Rhodesian Fed.  | 20                 | 72                 | 108                | 114               | 117               | 149               | 165               |
| India.....      | 14                 | 40                 | 65                 | 66                | 90                | 67                | 65                |
| Canada.....     | 7                  | 20                 | 34                 | 36                | 28                | 38                | 36                |
| Others.....     | 8                  | 11                 | 26                 | 30                | 35                | 28                | 30                |
| Total.....      | 374                | 531                | 636                | 664               | 669               | 656               | 704               |
| Percent U.S. .. | 87                 | 73                 | 63                 | 63                | 60                | 57                | 58                |

1/ Does not include exports from Mainland China, which move almost entirely to Soviet Bloc countries.

2/ Partially estimated.

TABLE 10. Cigarette Leaf: U.S. Imports for Consumption, for Specified Periods

| Country of Origin | Average<br>1934-38 | Average<br>1950-54 | 1957              | 1958              | 1959              | 1960              |
|-------------------|--------------------|--------------------|-------------------|-------------------|-------------------|-------------------|
|                   | Million<br>Pounds  | Million<br>Pounds  | Million<br>Pounds | Million<br>Pounds | Million<br>Pounds | Million<br>Pounds |
| Turkey.....       | 18.2               | 53.8               | 60.0              | 65.1              | 69.6              | 74.4              |
| Greece.....       | 18.8               | 13.3               | 23.3              | 28.5              | 31.6              | 32.3              |
| Syria.....        | .6                 | 3.6                | 1.2               | 1.0               | .9                | .7                |
| Italy.....        | 4.2                | 1.0                | 1.5               | 1.7               | 1.8               | 2.0               |
| Cyprus.....       | .1                 | .2                 | .5                | 1.3               | .9                | 1.1               |
| Yugoslavia.....   | --                 | 1.0                | 3.5               | 4.0               | 4.6               | 5.5               |
| Others.....       | 2.5                | 3.5                | 1.2               | 3.0               | 2.5               | 3.1               |
| Total.....        | 44.4               | 76.4               | 91.2              | 104.6             | 111.9             | 119.1             |

TABLE 11. Flue-Cured Tobacco: World Production For Specified Periods

| Country          | Average<br>1935-39 | Average<br>1950-54 | 1957              | 1958              | 1959              | 1960 1/           |
|------------------|--------------------|--------------------|-------------------|-------------------|-------------------|-------------------|
|                  | Million<br>Pounds  | Million<br>Pounds  | Million<br>Pounds | Million<br>Pounds | Million<br>Pounds | Million<br>Pounds |
| United States... | 864                | 1,332              | 975               | 1,081             | 1,081             | 1,250             |
| Rhodesian Fed. . | 28                 | 117                | 149               | 156               | 195               | 222               |
| Canada.....      | 55                 | 138                | 152               | 181               | 153               | 203               |
| India.....       | 27                 | 102                | 130               | 105               | 137               | 139               |
| Brazil.....      | 13                 | 48                 | 74                | 102               | 91                | 111               |
| Japan.....       | 74                 | 121                | 205               | 194               | 180               | 157               |
| Italy.....       | 4                  | 24                 | 30                | 32                | 26                | 32                |
| Australia.....   | 5                  | 6                  | 10                | 12                | 14                | 20                |
| China, Mainland. | 235                | 458                | 615               | 643               | 700               | 750               |
| Others.....      | 45                 | 196                | 372               | 374               | 416               | 389               |
| Total.....       | 1,350              | 2,542              | 2,712             | 2,880             | 2,993             | 3,273             |
| Percent U. S. .  | 64                 | 52                 | 36                | 38                | 36                | 38                |

1/ Preliminary.



